Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A method of inserting a wave winding into a stator of a polyphase rotating electrical machine, the stator comprising:

(A) laminations with a hole through the center and having an axis of symmetry and

(B) slots running axially along a radially inner faceof the laminations, these slots providing a plurality of receiving positions arranged in tiers radially, and

(C) the winding comprising a plurality of phase windings each having an electrically conductive continuous wire,

the method comprising the following steps:

shaping each winding, the wire thereof being formed into a succession of crenellations connected by linking segments, each crenellation comprising two lateral branches facing one another each intended to be inserted at a receiving position of a slot, and a top branch connecting the two lateral branches;

placing the windings on an insertion tool;

inserting the windings into the slots of the stator,

wherein the step of placing the windings is implemented on a cylindrical insertion tool, each winding constituting several turns around the insertion tool, these turns being superimposed in a given order,

and in that the windings are wound around the insertion tool at the same time, the turns that follow one another in said given winding order belonging alternately to the different windings;

and in that the windings comprise overhangs;

a) each of which runs from (i) a branch in one slot to (ii) another in another slot and runs along an axial end of the stator;

b) in which an overhang located at a radially inner position in a slot has a transverse height which is relatively small; and

c) in which an overhang located at a radially outer position in a slot has a transverse height which is relatively large.

2. (Previously Presented) The method according to Claim 1, wherein the step of inserting the turns into the slots of the stator is implemented in the reverse order to the winding order, the lateral branches of these turns progressively occupying radially more inner positions.

3. (Previously Presented) The method according to Claim 1, wherein the winding order comprises a succession of identical sequences, each sequence consisting of one turn of each winding.

4. (Previously Presented) The method according to Claim 1, wherein, on the insertion tool, the crenellations extend in respective planes parallel to the axis of symmetry of the insertion tool, or slightly inclined with respect to this axis.

5. (Previously Presented) The method according to Claim 1, wherein step 3) of inserting the windings into the slots is implemented by moving the insertion tool along the axis of symmetry of the stator.

6. (Previously Presented) The method according to Claim 1, wherein the top branches of the crenellations are curved and form a winding overhang on a first axial side of the stator.

7. (Previously Presented) The method according to Claim 6, wherein the linking segments connect two respective lateral branches of two neighboring crenellations along the wire and have a curved shape, these segments forming a winding overhang on a second axial side of the stator opposite to the first.

8. (Previously Presented) The method according to Claim 7, wherein the top branches and/or the linking segments formed at step 1) have increasing or decreasing heights along the windings.

9. (Previously Presented) The method according to Claim 8, wherein the turns whose lateral branches are inserted in radially outer positions of bottoms of slots have top branches and/or linking segments with heights relatively greater than the turns whose lateral branches occupy radially inner positions.

10. (Previously Presented) The method according to Claim 1, wherein it comprises, after step 3), a step 4) of shaping the winding overhangs by inclining the linking segments and/or the top branches towards the inside.

11. (Previously Presented) The method according to Claim 1, wherein it comprises, after step 3), a step 4) of shaping the winding overhangs by inclining the linking segments and/or the top branches towards the outside.

12. (Previously Presented) The method according to Claim 1, wherein it comprises, between steps 1) and 2), a step 1') of local shaping of the wire in areas of this wire intended to cross other wires, or other areas of the same wire, once the windings have been inserted into the stator.

13. (Previously Presented) The method according to Claim 1, wherein the wire has a round cross-section, the slots having a circumferential width that is a multiple of the diameter of the wire.

14. (Previously Presented) The method according to Claim 13, wherein the slots have a circumferential width corresponding to the diameter of the wire, the lateral branch occupying the radially most inner position being deformed by broadening in a circumferential direction so as to hold the lateral branches occupying the other positions inside the slot.

15. (Previously Presented) The method according to Claim 13, wherein the slots have a circumferential width equal to at least two diameters of the wire and have on a radially inner side an opening partially closed on two opposite sides by two axial steps, the lateral branches occupying the slots being held inside it by a flat wedge resting on the steps on an inner side of the slot.

16 - 35 (Cancelled)